

















Working under extreme conditions

Robust solutions which provide reliable services under extremely wet ambient conditions are crucial in water and wastewater systems.

Belden offers the right monitoring and control solutions for these requirements.



Plant Control Network System



Office Network System



Plant Information Network System



Plant-wide Wireless System



Security System:



CCTV



Enclosure Alarm





Intrusion **Detection**



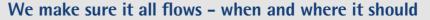
Administration Office Security Gate

Control Room

Secondary Clarifiers







In today's water and wastewater treatment plants, uncompromising reliability and maximum availability under extreme conditions are called for: humidity, grit, sludge and in some cases corrosion-causing gases, such as hydrogen sulfide or chlorine, place enormous demands on components and equipment. Belden's product spectrum is engineered to meet these heavy-duty requirements over the long term, and to ensure top performance and reliability in water supply and wastewater treatment plant networks.





Surveillance

Fire Control/

Disaster

Prevention



Perimeter







Belden Solutions for Water and Wastewater Treatment Plants

Solution	Product Group		No. Product Series	Plant Control System	Office Network System	Plant Information Network System	Plant-wide Wireless System	Security System				
		No.						CCTV Surveillance	Fire control/ Disaster Prevention	Enclosure Alarm	Perimeter Intrusion Detection	Public Address
	Managed DIN Rail Mount Switch	1	Hirschmann RS Series (OpenRail)	•				1				
Industrial Networking		2	Hirschmann BOBCAT Series (with TSN)	•			,					
		3	Hirschmann MSP Series (Layer 2 & 3)	•	ነ	•		r			1	
		4	Hirschmann RSP Series (with TSN)	•			r	1				
		5	Hirschmann RSR Series	•	1		† 	•		' ! !	!	
	Rack Mount Switch (Workgroup/Backbone)	6	Hirschmann MACH100 Series	!	•			7	,	,		
		7	Hirschmann GREYHOUND Series	•	•	•			 			
		8	Hirschmann MACH1000 Series			•	 - -	 	 	 		
		9	Hirschmann MACH4000 Series	•	•			 	 			
		10	Hirschmann DRAGON MACH4x00 Series		•			•	 			
	Industrial Cellular Router	11	Hirschmann IOWL LTE M12		1	•	i i	! !	i i	: :		
	Industrial Wireless LAN	12	Hirschmann OpenBAT Series Industrial Wireless Access Point		•		•	, , ,				
		13	Hirschmann BAT450-F Industrial Wireless Access Point		1 : :		•	r		! :	1	
		14	Hirschmann BAT867-R Industrial Wireless Access Point		•		•	i :				
		15	Hirschmann BAT-WLC Controller	:			•	1 1 1	/	/	i	
	Management, Secure Remote Access & Software	16	Hirschmann Industrial HiVision Network Management Software	. •		•	L			(!
		17	Hirschmann Secure Remote Access Solution	•	i	•		; :		; :	!	
	Fiber Interfaces	18	Hirschmann Fieldbus Repeater	•	{ }		¦	L		!	!	i
	System Accessories	19	Belden Modular Industrial Patch Panel (MIPP)	•		•	L	•	•	(!		!
	Hi-SCOM Managed Full Gigabit POE/POE+ Switch	20	Hi-SCOM BN44/48 Series	i				•			!	!
		21	Hi-SCOM BN3049 Series	<u>-</u>	•		 	•		¦ ! !	i	:
	Industrial Security & Firewall	22	Hirschmann EAGLE20/30 Firewall	•		•	L	0	•	(: :	:	
		23	Tofino Xenon Security Appliance	•				r		;		
Industrial		24	GarrettCom DX/RX Series	•	; :	•	•			' ! !	i	
Cyber		25	Tripwire Enterprise (with Tripwire Data Collector)		•	•	L	d		! ! !		
Security		26	Tripwire Log Center	•	i	•		; :				
		27	Tripwire IP360		•	:	; :	1 	! !	{ 		
	Belden Electronic Wire and Cable	28	8760, 9841		/			L	L	!		•
Industrial Cable	Belden Fire Resistant Cable	29	BS6387CWZ, IEC60331, GB/T19666	•	•	•		; :	•		•	•
	Belden Control & Instrumentation Cable	30	EN50288-7, IEC60502-1	•	•	•		1 	! !	/ ! !	i	
	Belden Data & Protocol Cable	31	ProfiNet, Profibus, FF, RS485	•	! ! !		L	1 !		/ ! !		!
	Belden MachFlex Cable	32	MachFlex	•				; :	; :			
	Belden Industrial Ethernet Cable	33	CAT5e, CAT6, CAT6a, CAT7	•	•	•	; :	÷ •	•	•	•	•
	Belden Fiber Optic Cable	34	GUCN, GUDN	•	•	•	L		•	•	. •	•
	Belden VFD Cable	35	295xx series	•	i			r ! !	;	;		
Industrial Connectivity	LumbergAutomation M8/M12 Connector	36		•	(1	`	4		/	i	i
	LumbergAutomation Active I/O Module	37	LioN-M, LioN-R, LioN-P, LioN-Classic	•	(7	,	,	J	1
	LumbergAutomation Passive I/O Box	38	ASB-Classic, ASB-R	•	[1		i !	}	:
Enterprise Connectivity	Belden Copper Cable & Connectivity	39		•	•	•	•	. •	•	•	•	•
	Belden Fiber Cable & Connectivity	40		•	•	•	•	•	•	•	•	•
	Belden Audio Video Cable & Connectivity	41						. •			!	
	Belden Rack & Cabinet System				: !	-	: :		¦ !			



The Right Equipment for Water and Wastewater Networks

The Belden family includes some of the most trusted brands in the world: Hirschmann, Tofino Security, GarrettCom, Belden Cable, LumbergAutomation, Hi-SCOM and Tripwire. Our portfolio offers the breadth and depth to ensure a complete network infrastructure that stands up to the harshest operating conditions faced in water and wastewater treatment plants.

Industrial Networking Solutions

Managed DIN Rail Mount Switch



Hirschmann RS Series (OpenRail)

Configurable rail switches with management functions guarantee high availability of complex automation systems solutions and the option of network monitoring.

- Gigabit/Fast-Ethernet-Switch, managed, software Layer 2 Enhanced/Professional, for DIN rail store-and-forward-switching, fanless design
- Compact, managed OpenRail switches assure innovative redundancy solutions
- The possibility of network supervision for the highest availability of complex solutions



1

Hirschmann BOBCAT Series (with TSN)

The first industrial switch worldwide to provide advanced security and real-time communication through time-sensitive networking (TSN) technology on all ports for standardized Ethernet usage in event the most demanding application.

- Real-time TSN Ethernet support for precise data transmission
- Future proof the full GE design with the capability to even support 4x 2.5 GE fiber
- Reliability advanced security features, including wire-speed access control lists (ACL) and automatic denial-of service (DoS) prevention
- Flexibility increased bandwidth capabilities, supporting tri-speed fiber SFP slots with 100Mb/s, 1 Gigabit and 2.5 Gigabit speeds



Hirschmann MSP Series (Layer 2 & 3)

Configurable modular switches for mission critical applications with unique security features and innovative hardware redundancy methods to ensure complete protection of the network and maximum network availability.

- Industrially compatible, flexible, economical and future-proof
- Variety of port types, with up to 28 Gigabit ports
- Enables simple configuration and diagnosis using HiDiscovery, Industrial HiVision or web interface
- Comprehensive security functions such as port security, DHCP Snooping, Dynamic ARP Inspection and many more



Hirschmann RSP Series (with TSN)

RSP series offers a robust hardware and a powerful operating system optional supporting new redundancy protocols for uninterrupted data communication.

- Industrially compatible, flexible, economical and future-proof
- Variety of port types, with up to 28 Gigabit ports
- Enables simple configuration and diagnosis using HiDiscovery, Industrial HiVision or web interface
- Comprehensive security functions such as port security, DHCP Snooping, Dynamic ARP Inspection and many more





Hirschmann RSR Series

Maximum reliability in mission-critical applications. The manageable switches are designed for extremely high demands with regard to shock and vibration resistance and electromagnetic compatibility (EMC).

- Rugged Fast Ethernet or Gigabit Ethernet rail switch
- New design with metal housing
- DIN rail or wall mounted
- Modular design for maximum versatility
- Extended temperature range: 40° C up to + 85° C
- Extremely high EMI and vibration immunity





Hirschmann MACH100 Series

The comprehensive switching and routing functions, as well as the kettle lead power plug for the power supply make the MACH100 series workgroup switches a cost-effective alternative for layer 2/layer 3 applications with high data rates.

- Available in different full Gigabit versions
- Various redundancy methods
- Extensive management methods and diagnostic functions



Hirschmann GREYHOUND Series

The GREYHOUND Gigabit Ethernet switch series with an entry level FE/Gig version and a layer 2/layer 3 full Gigabit type is designed for use in harsh industrial environments with a need for cost-effective, entry-level devices.

- Offers different configuration options including full Gigabit combo ports and TX ports
- Provides enhanced features through Hirschmann's operating system HiOS
- Allows adjustments-even in the field through the modular port configuration features



Hirschmann MACH1000 Series

Ruggedized MACH1000 industrial backbone switches offer the maximum of reliability. The new indestructible/rugged Hirschmann switches for Fast-Ethernet applications deliver excellent performance and high port density in a compact form factor.

- Offer high port density (up to 26 ports), excellent RFI/EMI shielding under extreme conditions and great flexibility
- Dynamic layer 2 and layer 3 routing



Hirschmann MACH4000 Series

The MACH4000 backbone switch provides real all-rounder (layer 2/layer 3 switch) and suits all applications – especially large networks, with a big number of media modules, high port density and the extendable routing functionality.

- Supports data rates up to 10 Gbit/s
- Dynamic layer 2 and layer 3 routing
- Fast redundancy methods



Hirschmann DRAGON MACH4x00 Series

The DRAGON MACH4x00 series offers an innovative, technically-advanced architecture that delivers superior bandwidth (up to 10 Gigabit) for connecting OT and IT networks. It is designed for the special requirements of industrial automation.

- Meets the relevant industry standards, providing very high operational reliability, even under extreme conditions, and also long-term reliability and flexibility
- Supports data rates up to 10 Gbit/s
- 4x2.5/10GE using SFP+
- All advanced HiOS Layer 3 functions

Industrial Cellular Router



Hirschmann OWL LTE M12

The OWL Industrial Cellular Routers offer increased routing functionalities and advanced security capabilities in a single, reliable product. It is designed for wireless communication in mobile networks that make use of the following technologies:

- LTE
- HSPA+
- UMTS
- EDGE
- GPRS



Industrial Wireless LAN



Hirschmann OpenBAT Series Industrial Wireless Access Point

Individually configurable via Internet, the robust access points in the OpenBAT series guarantee stable WLAN connections, even in the most demanding industrial applications, with an optimum price-performance ratio.

- PRP functionality
- IP 30/67 water and dust resistant
- Support of multiple channels and prioritized channel scan
- NAT and "Keep client connection alive" function



Hirschmann BAT450-F Industrial Wireless Access Point

Dual Band Ruggedized (IP65/67) Industrial Wireless LAN Access Point/Client with IEEE 802.11n for installation in harsh environment.

- Can be customized to support a variety of wireless and wired connections
- Combined with the latest HiLCOS software, it provides extensive redundancy and security functions, as well as IPv4/6 routing
- Ethernet port 1: 8-pin, X-coded M12 plug for 10/100/1000Mbit/s, PoE port (IEEE 802.3af);
- Interface2: V.24/ACA11: 4-pin, A-coded M12 socket
- Integrated ESD protection



Hirschmann BAT867-R Industrial Wireless Access Point

The BAT867-R offers only the essential interfaces – one radio, one Ethernet port and one power supply – for applications in need of a compactly designed, cost-effective and easy-to-install wireless access point.

- Can operate at up to 867 Mbps
- 2 x 2 MIMO support
- Support of 802.11ac standard
- Version with IP40/RJ45 and IP65/M12 connectivity



Hirschmann BAT-WLC Controller

The BAT-Controller WLC provides centralized management of a large number of WLAN clients and access points, with up to a thousand access points per controller

- Management from 25 to 1000 access points and clients
- Integrated IP router with firewall and VPN support
- Fast roaming possible across a number of subnetworks

Management, Secure Remote Access & Software



Hirschmann Industrial HiVision Network Management Software

Industrial HiVision is designed to meet the needs for maximum network visibility. It saves you time, reduces errors and provides a snapshot of network health so you can easily increase availability and enhance security.

- MultiConfig configures hundreds of devices from any manufacturer simultaneously
- Alerts are generated when unauthorized changes are made, rogue devices are added or MAC/IP address pairs change
- User roles control access to the network by granting different levels of access rights
- HiProvision MPLS-TP Provisioning Software



Hirschmann Secure Remote Access Solution

Combined hardware and software system that brings simplicity to remote network access, programming and diagnostics.

- Ability for operators to use SCADA or diagnostic software as if the operator was on-site
- Faster response times to failures and preventative maintenance is enabled by utilizing remote diagnostics
- Productivity increases when experts are always available and remote programming is an option
- Reduced downtime with on-demand access for troubleshooting or programming
- Improved productivity with access and equipment control for remote facilities/ employees
- Value Added Solution capabilities, such as remote data logging for preventative or predictive maintenance

Fiber Interfaces



Hirschmann Fieldbus Repeater

Fiber Interfaces repeater for standardized fieldbus protocols. These repeaters provide seamless redundancy to any kind of fieldbus by simultaneously extending the distance through fiber cables.

- Support Modbus, Profibus and 485/232 protocol
- Support multi fiber interface
- Support ring redundancy topology
- Support ATEX Zone 2 certificate
- IP40 housing



System Accessories



Belden Modular Industrial Patch Panel (MIPP)

Modular Industrial Patch Panel (MIPP) from Belden is a termination panel that offers significant space and cost savings. The panel easily manages both copper and fiber cables.

- High port density for maximum up to 24 ports
- Available as both single and double modules for fiber, copper
- Up to 6 modules can be combined in one line

Hi-SCOM Managed Full Gigabit POE/POE+ Switch



Hi-SCOM BN44/48 Series

- The BN44/BN48 Series industrial full Gigabit managed 6/10 ports Ethernet switch with up to 4/8 10/100/1000Mbps PoE (IEEE 802.3af/at) ports, and 2 1000Mbps SFP ports, 4Mbits memory, and supports static Layer 3 routing
- The BN44/BN48 Series switches can provide power and data directly through Ethernet cable, ideal for CCTV, ITS and building automation related applications



Hi-SCOM BN3049 Series

The BN3049 Series industrial full Gigabit managed 26/port Ethernet switch with up to 24 10/100/1000Mbps PoE (IEEE 802.3af/at) ports (including 4 shared SFP ports) and 2 1000MBPs SFP ports, 4Mbits memory, and supports static Layer 3 routing.

- With a total switch fabric of 58Gbps, the BN3049 can handle large amounts of data linking to an industrial backbone or high-capacity servers, and has capability of providing wire-speed throughput in the temperature range from -25 to 65 degree Celsius without any packet loss and CRC error
- It greatly simplifies the tasks of upgrading the industrial network for catering to increasing bandwidth demands

Industrial Cyber Security Solutions

Industrial Security & Firewall



Hirschmann EAGLE20/30 Firewall

Multi-port Firewalls offer absolute flexibility for physical deployment combined with state-of-the-art security functionality tailored to the unique requirements of industrial Ethernet networks.

- Advanced Security Features and built-in HiSecOS software eliminate the need for multiple routers and protect your production cell.
- Comes with up to 8 ports, including 2 x Gigabit, 4 x Fast Ethernet and more
- Defense in Depth at Layer 3 by combining Filtering and Deep Packet Inspection
- NAT (Network Address Translation)



Tofino Xenon Security Appliance

The Tofino Xenon Industrial Security Appliance is a Layer 2 Industrial Firewall purpose-built to protect ICS/SCADA against cyber threats. The device now offers two deep packet inspection Loadable Security Modules (LSM) for DNP3 and IEC 104 (IEC-60870-5-104). Other LSMs include industrial protocols such as EtherNet/IP, Modbus TCP and OPC.

- Permits read-only and read/write access for Modbus TCP data
- Blocks any traffic that does not conform to the protocol specification
- Permits device restarts only from the shift operations manager's terminal



GarrettCom DX/RX Series

- DC Power supplies, from Low V to High V available. In many cases can be mixed and matched with other DC /AC power supplies
- AC Auto-sensing world-use ready Power supply options
- Extended temperature range and security software optional add-on
- Different Fiber distances and Fiber connectors supported
- MNS-DX software included on all routers, DS-software for DS-series
- Many accessories such as rack mounts, front or rear mount options
- Alarm Terminal-Block for software and hardware alarms
- Tray mounting





tripwire. Data Collector

Tripwire Enterprise (with Tripwire Data Collector)

Tripwire® Enterprise is a security configuration management (SCM) suite that provides fully integrated solutions for policy, file integrity and remediation management. Tripwire® Data Collector, which is an extension of Tripwire® Enterprise, provides an innovative approach for industrial organizations to assess configurations, security and status in their environments – a simplified and cost-effective solution for maintaining system hardening and continual proof of compliance for standards like IEC 62443

- Increased network visibility
- Web Retriever configuration scanning
- Communication with industrial protocols
- No-touch integration with third-party software



Tripwire Log Center

Tripwire® Log Center® provides secure, reliable centralized log collection, analysis and delivery. Tripwire Log Center integrates with your existing infrastructure and includes a large library of available correlation rules, empowering your team to monitor, detect and quickly respond to threats in your environment.

- Centralized Forensics Data
- Enabling Local Expertise
- Efficient Analytics
- Cost Effective Compliance



Tripwire IP360

You have more to protect, fewer resources with which to do it, and more alerts than you can handle. Tripwire® IP360™ is an enterprise-class vulnerability management solution that enables cost-effective reduction of cyber threat risk by focusing your remediation efforts on the highest risks and most critical assets.

Industrial Cable Solutions

Belden Electronic Wire & Cable



With an unmatched ability to ensure system uptime, Belden's "Classics" electronic, audio, control and instrumentation cables have been specified for rugged industrial jobs for decades. These cables meet the technical requirements of many different types of systems with proven reliability and performance that is best-in-class. Backed by a 10-year, no-cost warranty, these hardy essentials will outlast alternatives even in the most demanding environments.

- Available in wide variety of gauge sizes, insulation materials, shielding configurations and jacketing materials
- Multi-cores/pairs construction with unsurpassed quality and reliability
- Robust designs which meets or exceed UL standards
- Proven performance and installation worldwide with over 40 years in the industry
- RS-232, RS-422/423, & RS-485
- Control & Instrumentation
- Fire Alarm/Security
- Power Supply
- Audio
- Computer/P.O.S.

Belden Fire Resistant Cable



Belden's fire survival & circuit integrity cables ensures continuous operation of emergency circuits, lowest smoke and zero emission of toxic gases in critical & hazardous applications.

- Manufactured with a hybrid mica glass tape, highly engineered insulation materials and LSZH sheath
- Fire resistance with a high performance which can meet IEC60331, GB19666, BS6387, EN50200 etc
- Voltage optional 90V 300V 500V and 1kV
- Cores and Pairs, Triple or Quad optional



Belden Control & Instrumentation Cable



Belden control and instrumentation cables provide the backbone for industrial environments, delivering signal and power from controllers to devices. Reliability – even in the harshest of environments – is the hallmark of Belden C&I cable products.

- Full range of conductor sizes in metric and AWG
- Choice of various insulation material to ensure key electrical performance and jacketing material to meet rigorous installation
- Cable designed by IEC, EN, UL, AS/NZS standards
- Voltage optional 90V 300V 500V and 1kV
- Cores and Pairs, Triple or Quad optional
- High performance of Impendence and Capacity
- Used in computer and PLC systems
- Also suitable for deployment outdoor with sunlight and oil resistance

Belden MachFlex Cable



Be confident in your mission-critical application installations of flexible and flexing cables. Across the entire range of MachFlex™ cables, you can decrease the total cost of ownership of your machine or device through reduced cable maintenance cost and improved uptime by specifying reliable cabling infrastructure. In addition, you can solve the space-saving puzzle by utilizing flexible cables designed for tight spaces while maintaining the

puzzle by utilizing flexible cables designed for tight spaces while maintaining the physical and mechanical requirements needed for rigorous motion.

- Various conductor sizes from 0.14mm2 to 35.00mm2
- Bare or tinned copper conductors (DIN VDE 0295)
- PVC or LSZH insulation & jacket / sheath
- Optional ground wire in green / yellow color
- Optional foil & braid shield
- Optional tinned copper braid (CY)
- Optional steel wire braid (SY)
- Voltage (Uo/U) = 300/500V
- Variety of insulation & jacket color options
- Coils or drum packaging

Belden Data & Protocol Cable



With the broadest Data Bus portfolio in the industry, Belden is sure to have a solution for your application. These cables are tested and proven to work in extreme temperatures and demonstrate resistance to oil.

- All protocol used such as FOUNDATION Fieldbus, PROFIBUS DP and PA, ControlNet, DeviceNet, Industrial RS-485, Modbus, CANopen, Canbus, Profinet etc
- Different impedance requirement
- Fire resistant and Flame retardant optional
- Armoring optional
- Low smoke and halogen-free optional

Belden Industrial Ethernet Cable



The comprehensive Industrial Ethernet cable range ensures the highest level of reliability, quality and performance.

- Covering current and future-proof applications such as PoE to PoE++, 2.5 and 10 Gbit/s
- Designed and built for harsh and mission-critical environments
- End-to-end solution offering complete suitability and meeting local expertise



Belden Fiber Optic Cable



Belden's loose tube cables are ideal for both outdoor & indoor/outdoor applications, including use in conduit, direct burial, lashed aerial, trucking. Their designs utilize 250µm fibers in both central & multi loose tube constructions ranging in fiber counts from 2 to 288.

- Indoor use or outdoor use
- Single module and Multi-module are available
- Armored are optional
- Fire resistance are optional
- Low smoke and halogen-free are available
- Oil and UV-resistant outer jacket
- Offers a projected lifetime > 30 years

Belden VFD Cable



As the original developer of high quality VFD cable, Belden provides superior electrical performance and reliability, for industrial environments and applications as conveyor systems and driverless transport systems.

- High-strand tinned copper circuit conductors
- High Flex variant TPE jacket rated for 10 million cycles
- Robust ground and shielding system protects equipment from disruption

Industrial Connectivity Solutions

LumbergAutomation M8/M12 Connector



Key features include:

- Available with 2 to 19 pins
- A-, B-, U-, D- and X-coded
- Straight and angled variants
- For voltages up to 250V (M12, M23, 7/8") or 60V (M5, M8) and currents up to 12A (7/8"), 10A (M23), 4A (M8, M12) or 1A (M5)
- with and without LED function indicator
- Numerous connection possibilities mated clamp terminals, cage clamp terminals and quick connection technologies
- Protection class up to IP65, IP67, IP68 and IP69K

LumbergAutomation Active I/O Module



LioN-C, M, S, R series stand alone active I/O modules cover most popular fieldbus and industrial Ethernet protocols, such as Profibus, DeviceNet, CANOpen, Interbus, Asi, and Profinet, Ethernet/IP, EtherCAT.

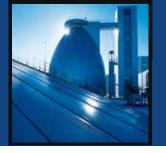
- M8 or M12 port
- DI / DO / DIO versions are available
- Environmental temperature depending on type from - 25°C to +60°C
- Materials (depending on type of module)
 - Housing: die-cast zinc, V4A, PBT or PUR
 - Inserts: PA
 - Contacts: CuZn, pre-nickeled and gold plated
- Protection class IP67/IP68/IP69K
- Electrical data
 - Nominal current at +40°C: 0.5A to 2A per channel and up to 12 A per module
 - Nominal voltage: 18 to 30 V DC

LumbergAutomation Passive I/O Box



Passive I/O boxes come in a variety of configurations and meet practically every on-machine application requirement. They include 4, 6, 10 or 12-port designs with M8 or M12 connections, single or duplex assignments, fixed home run cables or as an on-board pluggable variant. All variants are available with or without LED function indicators.

- Space-saving design for versatile applications in a minimum of space
- Quick installation, due to various fixing options
- Broad range of applications, thanks to high vibration and shock resistance
- Stainless-steel models are also provided for use in food-processing machinery and other special applications where aggressive chemicals or cleaning agents are used



Enterprise Connectivity Solutions

Belden Copper System



Belden Copper Systems represent networking leadership at every turn, providing top performing structured cabling systems that reduce downtime, ease deployment and facilitate migration to advanced networking technologies and converged building systems. Designed with innovative technologies that provide beyond standards performance, Belden Copper Systems are available in five different levels to meet your specific needs — no matter what your application, your environment or your plans.

- 10GA System Category 6A
- 1685ANH System Category 6A
- 78** System Category 6
- 1583* System Category 5E

Belden Fiber System



Involved in the development of optical fiber components for over 40 years, Belden is a leading supplier of high-quality, cost effective optical fiber cabling systems.

The FiberExpress (FX) Systems are the culmination of Belden's experience and expertise in a variety of applications, including data centers, premise and campus network backbone infrastructures, fiber-to the-desk (FTTD) applications, and horizontal and centralized cabling systems. Guaranteed to meet or exceed all applicable TIA/EIA, ISO/IEC and IEEE standards, each end-to end FX System is designed to offer reduced complexity, increased flexibility, and rapid installation.

- FiberExpress® Systems
- Fiber Cable Assemblies
- Workstation
- Wall Mount Systems
- Optical Fiber Cables

Belden Audio Video Cable & Connectivity



- Belden Audio Video Cable & Connectivity designed to support HDBaseT, HDMI and IEEE AVB, Belden's AV video display, products are designed for commercial audio distribution, automation and lighting control
- Audio Video cabling from Belden is built on innovative products, technical expertise and a worldwide distribution network that can fulfill any and all Audio Video requirements
- Whether you need HDMI, DVI and VGA assemblies, or custom-made assemblies, Belden audio and video assemblies provide the same superior quality that the rest of Belden's commercial AV product portfolio offers

Belden Rack & Cabinet System



Belden offers a complete selection of racking, cabinets, power distribution units, monitoring and airflow management products to meet your infrastructure needs for optimizing system performance.

- Belden provides a portfolio of enclosures and racks that meet security, availability and efficiency challenges.
- The X Series (XM, XS, XN), seamlessly integrate power distribution, airflow containment and management, networking connectivity and cable management.
- Belden in-enclosure mounted Power Distribution Units (PDUs) and Environment Monitors and Sensors are designed from high quality components to support all your mission critical applications.



Industrial Cyber Security Secure. Reliable. Resilient

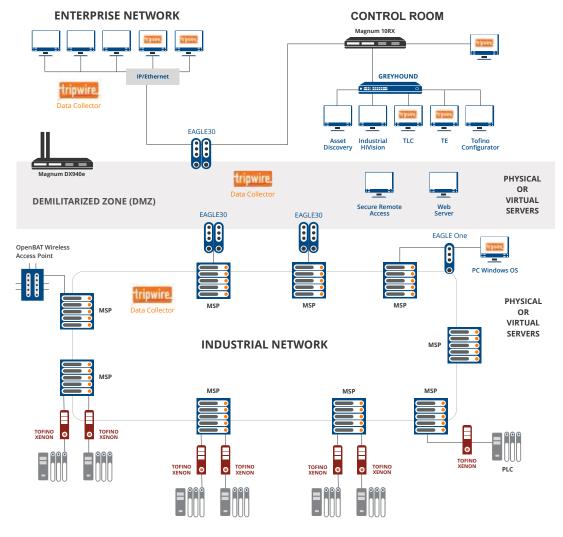
Your industrial infrastructure faces new threats everyday. Whether intentional and malicious or unintentional and accidental, the impact of these threats can be tremendous, leading to costly downtime or lapses in control that could jeopardize the operational safety of your systems.

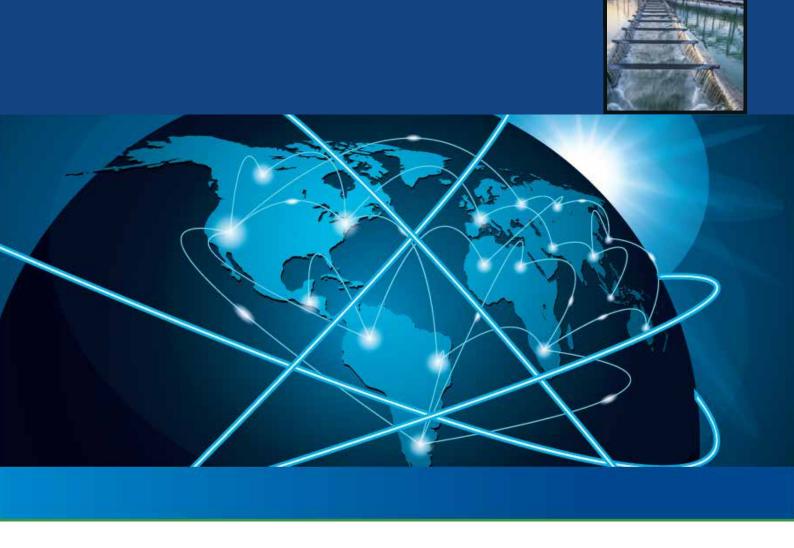
Protect your infrastructure. Belden's broad portfolio of industrial cyber security products enables coverage for all types of threats in water and wastewater treatment industries-deliberate or involuntary. From hardware devices with embedded security features to cyber resilient software, you'll find your end-to-end security solution with Belden.

Take Your First Steps To Real Network Security

Network Infrastructure	Log Management	Vulnerability Assessment	Change Detection Integrity Monitoring		
Integrated Network access control Denial of Service (DoS) protection Zones (network segmentation & conducts (traffic filtering) Bandwidth limitation Deep Packet Inspection for Industrial Protocols	Passive • Syslog data collection • Log filtering t management investigation analytics & reporting	Periodic • Security vulnerability & configuration assessment • Best practice & policy tests	Continuous Real-time change detection Best practice assessment & remediation Compliance analytics & reporting		
GarrettCom ABADAR (1990) THIRSCHMANN ABADAR (1990) TOFINO SECURITY	◆LOG CENTER	◆ ENTERPRISE	◆ ENTERPRISE		

A true security solution expands and changes over time. Follow a continuum like this one-from network infrastructure to passive logging to more advanced solutions, such as continuous real-time change detection.





About Belden

Belden Inc. a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targetted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today's applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

For more information, visit us at: www.belden.com

www.beldensolutions.com

follow us on Twitter @BeldenIND

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